RAW SEQUENCE LISTING

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Application Serial Number: _10/809,953A_
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Date Processed by STIC: _8/1/06_

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IFW16

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 3 <110> APPLICANT: Van Mellaert, Herman
 4         Botterman, Johan
 5         Van Rie, Jeroen
 6         Joos, Henk
 8 <120> TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY
BINDING Bt
 9         INSECTICIDAL CRYSTAL PROTEINS
11 <130> FILE REFERENCE: 1021565-000155
13 <140> CURRENT APPLICATION NUMBER: 10/809,953A
14 <141> CURRENT FILING DATE: 2004-03-26
16 <150> PRIOR APPLICATION NUMBER: 09/661,061
17 <151> PRIOR FILING DATE: 2000-09-13
19 <150> PRIOR APPLICATION NUMBER: PCT/EP/00905
20 <151> PRIOR FILING DATE: 1990-05-30
22 <150> PRIOR APPLICATION NUMBER: GB 89401499.2
23 <151> PRIOR FILING DATE: 1989-05-31
25 <160> NUMBER OF SEQ ID NOS: 10
27 <170> SOFTWARE: PatentIn version 3.3
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 12
31 <212> TYPE: DNA
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50 <213> ORGANISM: Bacillus thuringiensis
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53 cggaggtatt ccatggagga aaataatc                               28
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58 <212> TYPE: DNA
59 <213> ORGANISM: Bacillus thuringiensis
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62 cctatttgaa gccatggtaa ctcctccttt tatg                        34
65 <210> SEQ ID NO: 5
66 <211> LENGTH: 3903
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RAW SEQUENCE LISTING   DATE: 08/01/2006
PATENT APPLICATION: US/10/809,953A   TIME: 09:46:26

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Output Set: N:\CRF4\08012006\J809953A.raw

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73 <222> LOCATION: (264)..(3761)
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78 aaactagtgc aactaaatat ttttataatt acactgatta aatactttat ttttgggagt     120
80 aagatttatg ctgaaatgta ataaaattcg ttccattttc tgtattttct cataaaatgt     180
82 ttcatatgct ttaaattgta gtaaagaaaa acagtacaaa cttaaaagga ctttagtaat     240
84 ttaataaaaa aaggggatag ttt atg gaa ata aat aat caa aac caa tgt gtg     293
85                          Met Glu Ile Asn Asn Gln Asn Gln Cys Val
86                           1               5                  10
88 cct tac aat tgt tta agt aat cct aag gag ata ata tta ggc gag gaa     341
89 Pro Tyr Asn Cys Leu Ser Asn Pro Lys Glu Ile Ile Leu Gly Glu Glu
90               15                  20                  25
92 agg cta gaa aca ggg aat act gta gca gac att tca tta ggg ctt att     389
93 Arg Leu Glu Thr Gly Asn Thr Val Ala Asp Ile Ser Leu Gly Leu Ile
94           30                  35                  40
96 aat ttt cta tat tct aat ttt gta cca gga gga gga ttt ata gta ggt     437
97 Asn Phe Leu Tyr Ser Asn Phe Val Pro Gly Gly Gly Phe Ile Val Gly
98           45                  50                  55
100 tta cta gaa tta ata tgg gga ttt ata ggg cct tcg caa tgg gat att    485
101 Leu Leu Glu Leu Ile Trp Gly Phe Ile Gly Pro Ser Gln Trp Asp Ile
102      60                  65                  70
104 ttt tta gct caa att gag caa ttg att agt caa aga ata gaa gaa ttt    533
105 Phe Leu Ala Gln Ile Glu Gln Leu Ile Ser Gln Arg Ile Glu Glu Phe
106 75                  80                  85                  90
108 gct agg aat cag gca att tca aga ttg gag ggg cta agc aat ctt tat    581
109 Ala Arg Asn Gln Ala Ile Ser Arg Leu Glu Gly Leu Ser Asn Leu Tyr
110              95                  100                 105
112 aag gtc tat gtt aga gcg ttt agc gac tgg gag aaa gat cct act aat    629
113 Lys Val Tyr Val Arg Ala Phe Ser Asp Trp Glu Lys Asp Pro Thr Asn
114          110                 115                 120
116 cct gct tta agg gaa gaa atg cgt ata caa ttt aat gac atg aat agt    677
117 Pro Ala Leu Arg Glu Glu Met Arg Ile Gln Phe Asn Asp Met Asn Ser
118      125                 130                 135
120 gct ctc ata acg gct att cca ctt ttt aga gtt caa aat tat gaa gtt    725
121 Ala Leu Ile Thr Ala Ile Pro Leu Phe Arg Val Gln Asn Tyr Glu Val
122      140                 145                 150
124 gct ctt tta tct gta tat gtt caa gcc gca aac tta cat tta tct att    773
125 Ala Leu Leu Ser Val Tyr Val Gln Ala Ala Asn Leu His Leu Ser Ile
126 155              160                 165                 170
128 tta agg gat gtt tca gtt ttc gga gaa aga tgg gga tat gat aca gcg    821
129 Leu Arg Asp Val Ser Val Phe Gly Glu Arg Trp Gly Tyr Asp Thr Ala
130              175                 180                 185
132 act atc aat aat cgc tat agt gat ctg act agc ctt att cat gtt tat    869
133 Thr Ile Asn Asn Arg Tyr Ser Asp Leu Thr Ser Leu Ile His Val Tyr
134              190                 195                 200
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136 act aac cat tgt gtg gat acg tat aat cag gga tta agg cgt ttg gaa      917
137 Thr Asn His Cys Val Asp Thr Tyr Asn Gln Gly Leu Arg Arg Leu Glu
138         205                     210                 215
140 ggt cgt ttt ctt agc gat tgg att gta tat aat cgt ttc cgg aga caa      965
141 Gly Arg Phe Leu Ser Asp Trp Ile Val Tyr Asn Arg Phe Arg Arg Gln
142     220                     225                 230
144 ttg aca att tca gta tta gat att gtt gcg ttt ttt cca aat tat gat     1013
145 Leu Thr Ile Ser Val Leu Asp Ile Val Ala Phe Phe Pro Asn Tyr Asp
146 235                     240                 245                 250
148 att aga aca tat cca att caa aca gct act cag cta acg agg gaa gtc     1061
149 Ile Arg Thr Tyr Pro Ile Gln Thr Ala Thr Gln Leu Thr Arg Glu Val
150                     255                 260                 265
152 tat ctg gat tta cct ttt att aat caa aat ctt tct cct gca gca agc     1109
153 Tyr Leu Asp Leu Pro Phe Ile Asn Gln Asn Leu Ser Pro Ala Ala Ser
154             270                 275                 280
156 tat cca acc ttt tca gct gct gaa agt gct ata att aga agt cct cat     1157
157 Tyr Pro Thr Phe Ser Ala Ala Glu Ser Ala Ile Ile Arg Ser Pro His
158         285                 290                 295
160 tta gta gac ttt tta aat agc ttt acc att tat aca gat agt ctg gca     1205
161 Leu Val Asp Phe Leu Asn Ser Phe Thr Ile Tyr Thr Asp Ser Leu Ala
162     300                 305                 310
164 cgt tat gca tat tgg gga ggg cac ttg gta aat tct ttc cgc aca gga     1253
165 Arg Tyr Ala Tyr Trp Gly Gly His Leu Val Asn Ser Phe Arg Thr Gly
166 315                 320                 325                 330
168 acc act act aat ttg ata aga tcc cct tta tat gga agg gaa gga aat     1301
169 Thr Thr Thr Asn Leu Ile Arg Ser Pro Leu Tyr Gly Arg Glu Gly Asn
170                 335                 340                 345
172 aca gag cgc ccc gta act att acc gca tca cct agc gta cca ata ttt     1349
173 Thr Glu Arg Pro Val Thr Ile Thr Ala Ser Pro Ser Val Pro Ile Phe
174             350                 355                 360
176 aga aca ctt tca tat att aca ggc ctt gac aat tca aat cct gta gct     1397
177 Arg Thr Leu Ser Tyr Ile Thr Gly Leu Asp Asn Ser Asn Pro Val Ala
178         365                 370                 375
180 gga atc gag gga gtg gaa ttc caa aat act ata agt aga agt atc tat     1445
181 Gly Ile Glu Gly Val Glu Phe Gln Asn Thr Ile Ser Arg Ser Ile Tyr
182     380                 385                 390
184 cgt aaa agc ggt cca ata gat tct ttt agt gaa tta cca cct caa gat     1493
185 Arg Lys Ser Gly Pro Ile Asp Ser Phe Ser Glu Leu Pro Pro Gln Asp
186 395                 400                 405                 410
188 gcc agc gta tct cct gca att ggg tat agt cac cgt tta tgc cat gca     1541
189 Ala Ser Val Ser Pro Ala Ile Gly Tyr Ser His Arg Leu Cys His Ala
190                 415                 420                 425
192 aca ttt tta gaa cgg att agt gga cca aga ata gca ggc acc gta ttt     1589
193 Thr Phe Leu Glu Arg Ile Ser Gly Pro Arg Ile Ala Gly Thr Val Phe
194             430                 435                 440
196 tct tgg aca cac cgt agt gcc agc cct act aat gaa gta agt cca tct     1637
197 Ser Trp Thr His Arg Ser Ala Ser Pro Thr Asn Glu Val Ser Pro Ser
198         445                 450                 455
200 aga att aca caa att cca tgg gta aag gcg cat act ctt gca tct ggt     1685
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201 Arg Ile Thr Gln Ile Pro Trp Val Lys Ala His Thr Leu Ala Ser Gly
202     460             465             470
204 gcc tcc gtc att aaa ggt cct gga ttt aca ggt gga gat att ctg act      1733
205 Ala Ser Val Ile Lys Gly Pro Gly Phe Thr Gly Gly Asp Ile Leu Thr
206 475             480             485             490
208 agg aat agt atg ggc gag ctg ggg acc tta cga gta acc ttc aca gga      1781
209 Arg Asn Ser Met Gly Glu Leu Gly Thr Leu Arg Val Thr Phe Thr Gly
210             495             500             505
212 aga tta cca caa agt tat tat ata cgt ttc cgt tat gct tcg gta gca      1829
213 Arg Leu Pro Gln Ser Tyr Tyr Ile Arg Phe Arg Tyr Ala Ser Val Ala
214             510             515             520
216 aat agg agt ggt aca ttt aga tat tca cag cca cct tcg tat gga att      1877
217 Asn Arg Ser Gly Thr Phe Arg Tyr Ser Gln Pro Pro Ser Tyr Gly Ile
218             525             530             535
220 tca ttt cca aaa act atg gac gca ggt gaa cca cta aca tct cgt tcg      1925
221 Ser Phe Pro Lys Thr Met Asp Ala Gly Glu Pro Leu Thr Ser Arg Ser
222     540             545             550
224 ttc gct cat aca aca ctc ttc act cca ata acc ttt tca cga gct caa      1973
225 Phe Ala His Thr Thr Leu Phe Thr Pro Ile Thr Phe Ser Arg Ala Gln
226 555             560             565             570
228 gaa gaa ttt gat cta tac atc caa tcg ggt gtt tat ata gat cga att      2021
229 Glu Glu Phe Asp Leu Tyr Ile Gln Ser Gly Val Tyr Ile Asp Arg Ile
230             575             580             585
232 gaa ttt ata ccg gtt act gca aca ttt gag gca gaa tat gat tta gaa      2069
233 Glu Phe Ile Pro Val Thr Ala Thr Phe Glu Ala Glu Tyr Asp Leu Glu
234             590             595             600
236 aga gcg caa aag gtg gtg aat gcc ctg ttt acg tct aca aac caa cta      2117
237 Arg Ala Gln Lys Val Val Asn Ala Leu Phe Thr Ser Thr Asn Gln Leu
238             605             610             615
240 ggg cta aaa aca gat gtg acg gat tat cat att gat cag gta tcc aat      2165
241 Gly Leu Lys Thr Asp Val Thr Asp Tyr His Ile Asp Gln Val Ser Asn
242     620             625             630
244 cta gtt gcg tgt tta tcg gat gaa ttt tgt ctg gat gaa aag aga gaa      2213
245 Leu Val Ala Cys Leu Ser Asp Glu Phe Cys Leu Asp Glu Lys Arg Glu
246 635             640             645             650
248 ttg tcc gag aaa gtt aaa cat gca aag cga ctc agt gat gag cgg aat      2261
249 Leu Ser Glu Lys Val Lys His Ala Lys Arg Leu Ser Asp Glu Arg Asn
250             655             660             665
252 tta ctt caa gat cca aac ttc aga ggg atc aat agg caa cca gac cgt      2309
253 Leu Leu Gln Asp Pro Asn Phe Arg Gly Ile Asn Arg Gln Pro Asp Arg
254             670             675             680
256 ggc tgg aga gga agt acg gat att act atc caa gga gga gat gac gta      2357
257 Gly Trp Arg Gly Ser Thr Asp Ile Thr Ile Gln Gly Gly Asp Asp Val
258             685             690             695
260 ttc aaa gag aat tac gtt acg cta ccg ggt acc ttt gat gag tgc tat      2405
261 Phe Lys Glu Asn Tyr Val Thr Leu Pro Gly Thr Phe Asp Glu Cys Tyr
262     700             705             710
264 cca acg tat tta tat caa aaa ata gat gag tcg aaa tta aaa gcc tat      2453
265 Pro Thr Tyr Leu Tyr Gln Lys Ile Asp Glu Ser Lys Leu Lys Ala Tyr
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266 715                 720                 725                 730
268 acc cgt tat caa tta aga ggg tat atc gaa gat agt caa gac tta gaa      2501
269 Thr Arg Tyr Gln Leu Arg Gly Tyr Ile Glu Asp Ser Gln Asp Leu Glu
270                 735                 740                 745
272 atc tat tta att cgt tac aat gca aaa cac gaa ata gta aat gta cca      2549
273 Ile Tyr Leu Ile Arg Tyr Asn Ala Lys His Glu Ile Val Asn Val Pro
274                 750                 755                 760
276 ggt aca gga agt tta tgg cct ctt tct gta gaa aat caa att gga cct      2597
277 Gly Thr Gly Ser Leu Trp Pro Leu Ser Val Glu Asn Gln Ile Gly Pro
278             765                 770                 775
280 tgt gga gaa ccg aat cga tgc gcg cca cac ctt gaa tgg aat cct gat      2645
281 Cys Gly Glu Pro Asn Arg Cys Ala Pro His Leu Glu Trp Asn Pro Asp
282     780                 785                 790
284 tta cac tgt tcc tgc aga gac ggg gaa aaa tgt gca cat cat tct cat      2693
285 Leu His Cys Ser Cys Arg Asp Gly Glu Lys Cys Ala His His Ser His
286 795                 800                 805                 810
288 cat ttc tct ttg gac att gat gtt gga tgt aca gac tta aat gag gac      2741
289 His Phe Ser Leu Asp Ile Asp Val Gly Cys Thr Asp Leu Asn Glu Asp
290                 815                 820                 825
292 tta ggt gta tgg gtg ata ttc aag att aag acg caa gat ggc cac gca      2789
293 Leu Gly Val Trp Val Ile Phe Lys Ile Lys Thr Gln Asp Gly His Ala
294             830                 835                 840
296 cga cta ggg aat cta gag ttt ctc gaa gag aaa cca tta tta gga gaa      2837
297 Arg Leu Gly Asn Leu Glu Phe Leu Glu Glu Lys Pro Leu Leu Gly Glu
298             845                 850                 855
300 gca cta gct cgt gtg aaa aga gcg gag aaa aaa tgg aga gac aaa cgc      2885
301 Ala Leu Ala Arg Val Lys Arg Ala Glu Lys Lys Trp Arg Asp Lys Arg
302     860                 865                 870
304 gaa aca tta caa ttg gaa aca act atc gtt tat aaa gag gca aaa gaa      2933
305 Glu Thr Leu Gln Leu Glu Thr Thr Ile Val Tyr Lys Glu Ala Lys Glu
306 875                 880                 885                 890
308 tct gta gat gct tta ttt gta aac tct caa tat gat aga tta caa gcg      2981
309 Ser Val Asp Ala Leu Phe Val Asn Ser Gln Tyr Asp Arg Leu Gln Ala
310                 895                 900                 905
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318             925                 930                 935
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321 Ala Ala Ile Phe Glu Glu Leu Glu Glu Arg Ile Phe Thr Ala Phe Ser
322     940                 945                 950
324 cta tat gat gcg aga aat att att aaa aat ggc gat ttc aat aat ggc      3173
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326 955                 960                 965                 970
328 tta tta tgc tgg aac gtg aaa ggg cat gta gag gta gaa gaa caa aac      3221
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VERIFICATION SUMMARY   DATE: 08/01/2006
PATENT APPLICATION: **US/10/809,953A**   TIME: 09:46:27

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